Remarks

This application is being submitted together with a Request for Continued Examination. Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-9, 18, 23, 54, and 63-95 are pending in the application, with 1, 54, and 86 being the independent claims. Claims 1, 7-9, 54, 64, 68, 71, 75, 79, 82, and 85 are sought to be amended. New claims 86-95 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Examiner Interview

Applicant and his attorneys thank the Examiner for the Examiner interview conducted on May 14, 2003. During the interview, Applicant's attorneys and the Examiner discussed the pending claims and the references applied by the Examiner to reject the pending claims.

Rejections under 35 U.S.C. § 112

On page 2 of the Office Action, the Examiner rejected claims 64-72 and 75-83 for allegedly being vague and indefinite. In the Office Action, the Examiner states that these claims contradicted parent claims 1 or 54 because of the different modes of operation recited. Applicant has amended the claims to remove the allegedly conflicting modes of operation and further clarify the claims in order to move this application toward allowance.

Reconsideration and withdrawal of this rejection are respectfully requested.

Rejections under 35 U.S.C. § 102

On page 2 of the Office Action, the Examiner rejected claims 1-9, 18, 23, 54, 63, 73, 74, 84, and 85 under 35 U.S.C. § 102 for allegedly being anticipated by U.S. Patent No. 5,389,849 to Asano et al. ("Asano") or U.S. Patent No. 5,673,041 to Chatigny et al. ("Chatigny"). Applicant respectfully traverses this rejection.

As discussed with the Examiner during the Examiner Interview, Asano appears to describe a tactility providing apparatus and manipulating device that uses the tactility providing apparatus. According to Asano, the apparatus is used to transmit tactility to a finger, as shown in FIG. 7 of Asano. The device is not used to obtain biologic features of the finger. According to Asano, the tactility providing apparatus includes a limited number of drivers such as a 6x8 matrix of drivers. (See, e.g., Asano col. 10, lines 4-8.)

As also discussed with the Examiner during the Examiner Interview, Chatigny appears to describe a reflective mode ultrasonic touch sensitive switch. A matrix array of touch sensitive switches according to Chatigny includes a small number of switches such as, for example, 20 switches in a matrix array having five rows and four columns. (See, e.g., Chatigny col. 8, lines 44-47.) There is no mention in Chatigny of using piezoelectric ceramic elements.

Nothing in Asano discloses or suggests a device capable of using "a piezoelectric ceramic sensor having a plurality of piezoelectric ceramic elements arranged in an array, said piezoelectric ceramic elements of said array being spaced on a pitch equal to or less than approximately 50 microns to detect features of a finger proximate to said array" and "a processor, coupled to said sensor, that receives an input from said sensor representative of features of the finger and produces an output," as recited in amended independent claim 1. Not only is the apparatus of Asano not intended to be used to detect features of a finger, as recited in the claims of the present application, but the apparatus of Asano cannot detect features of a finger such as, for example, the fingerprint pattern recited in claim 2 because the size of the drivers of Asano is too large to detect such features. Thus, for at least these reasons, claim 1 is patentable over Asano.

As with Asano, nothing in Chatigny discloses or suggests a device capable of using "a piezoelectric ceramic sensor having a plurality of piezoelectric ceramic elements arranged

in an array, said piezoelectric ceramic elements of said array being spaced on a pitch equal to or less than approximately 50 microns to detect features of a finger proximate to said array" and "a processor, coupled to said sensor, that receives an input from said sensor representative of features of the finger and produces an output," as recited in amended independent claim 1. Thus, claim 1 is also patentable over Chatigny.

Claims 2-9, 18, 23, 73-84 depend, either directly or indirectly from amended independent claim 1. Thus, claims 2-9, 18, 23, 73-84 are patentable over Asano and Chatigny for at least the same reasons that claim 1 is patentable over Asano and Chatigny, and further for the features they recite.

Independent claim 54 contains features similar to independent claim 1, and is thus patentable over Asano and Chatigny.

Claims 63-72 depend, either directly or indirectly from amended independent claim 54. Thus, claims 63-72 are patentable over Asano and Chatigny for at least the same reasons that claim 54 is patentable over Asano and Chatigny, and further for the features they recite.

For at least the above reasons, claims 1-9, 18, 23, 54, 63, 73, 74, 84, and 85 are patentable over Asano and Chatigny. Reconsideration and withdrawal of this rejection are respectfully requested.

Rejections under 35 U.S.C. § 103

On page 3 of the Office Action, the Examiner rejected claims 1-9, 18, 23, 54, 63, 73, 74, 84, and 85 under 35 U.S.C. § 103 for allegedly being unpatentable over Asano and Chatigny in view of U.S. Patent No. 5,623,930 to Wright et al. ("Wright") or U.S. Patent No. 5,971,927 to Mine et al. ("Mine"). The Examiner applies Wright or Mine for disclosing the detection of blood flow and bone density, and Doppler and echo mode operation. (See page 3 of the Office Action.) In the Office Action, the Examiner acknowledges that these references do not disclose or suggest the sensors and arrays recited in the claims of the present application. Applicant respectfully traverses this rejection.

For at least the reasons given above, claims 1-9, 18, 23, 54, 63, 73, 74, 84, and 85 are patentable over Asano and Chatigny, alone or in combination. As acknowledged by the Examiner in the Office Action, Wright and Mine do not make up for the deficiencies of

Asano and Chatigny. Furthermore, no motivation or suggestion to combine these teachings is provided. Thus, claims 1-9, 18, 23, 54, 63, 73, 74, 84, and 85 are patentable over Asano and/or Chatigny in view of Wright and/or Mine.

Reconsideration and withdrawal of this rejection are respectfully requested.

New Claims 86-95

New independent claim 86 recites features similar to amended independent claims 1 and 54. Thus, new independent claim 86 is patentable over the references applied by the Examiner for at least the reasons given above with regards to independent claims 1 and 54.

New claims 87-95 depend, either directly or indirectly from new independent claim 86. Thus, new claims 87-95 are patentable over the references applied by the Examiner for at least the same reasons that new independent claim 86 is patentable over the references applied by the Examiner.

Consideration and allowance of new claims 86-95 are respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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